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09/964,086	09/26/2001	William E. Richeson	CEQ01 P333	2451

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EXAMINER	
ROJAS, BERNARD	

ART UNIT	PAPER NUMBER
2832	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/964,086	RICHESON, WILLIAM E.	
	Examiner	Art Unit	
	BERNARD ROJAS	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22,32-35,37-43 and 45-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-22* is/are allowed.

6)☒ Claim(s) *32-35,37-43 and 45-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 32-35, 37-43, 45, 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groove (US 4,004,262).

Claim 32 and 33, Grove discloses an electromagnet with a polymer impregnated powder metal housing and core [60, col. 5 lines 30 to 40], a bobbin [70], a coil [64] and a friction material [100] comprising a polymeric donor material [col. 6 lines 7-24].

Groove fails to teach the claimed powder metal housing rim thickness.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the thickness of the rim of the housing to change the magnetic properties of the housing, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claim 34, Groove discloses the electromagnet of claim 32, wherein said polymeric donor material comprises at least one of polyethylenesulfide, epoxy, and phenolic [col. 6 lines 17-25].

Claim 35, Groove discloses the electromagnet of claim 34, wherein said polymeric donor material comprises glass fibers [col. 6 lines 17-25].

Claim 37, Grove discloses an electromagnet with a polymer impregnated powder metal core [60, col. 5 lines 30 to 40] containing a coil [64] with a moldable material [100, col. 6 lines 25 to 30] covering at least a portion of the core, the electromagnet having a magnetic cross section that is constant to within plus or minus three percent [figure 2] wherein the moldable material comprises a donor material [Lexan, epoxy, polyurethane and a natural or synthetic rubber].

Grove fails to teach that the donor material has and elasticity greater than about 2 million psi.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the elasticity of the donor material [epoxy, polyurethane and a natural or synthetic rubber] used depending on the desired frictional coefficient of the material, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 38, Groove discloses making a high-density sinter iron powder metal core. It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the composition of the powder metal to a specific Young's modulus to maximize the strength of the core, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 39, Groove discloses the claimed invention with the exception of using polyphenylene sulfide as a donor material. It would have been obvious to one of

ordinary skill in the art at the time the invention was made to use polyphenylene sulfide as a donor material, since applicant has not disclosed that this specific donor material solves any stated problem or is for any particular purpose and it

Claims 40 and 41, Grove discloses an electromagnet with a polymer impregnated, a high-density sinter iron powder metal core [60, col. 5 lines 30 to 40] containing a coil [64] with a moldable material [100, col. 6 lines 25 to 30] covering at least a portion of the core, It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a powder core strength within a certain range to adjust the strength of the core depending on the environment for which it is used, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

Claim 42, Groove discloses that the moldable material comprises a donor material with an elasticity [Lexan, epoxy, polyurethane and a natural or synthetic rubber].

Grove fails to teach that the donor material has and elasticity greater than about 2 million psi.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the elasticity of the donor material [epoxy, polyurethane and a natural or synthetic rubber] used depending on the desired frictional coefficient of the material, since it has been held that discovering an optimum value of a result

effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 43, Groove discloses making a high-density sinter iron powder metal core. It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the composition of the powder metal to a specific Young's modulus, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 45, Grove discloses an electromagnet with a polymer impregnated powder metal core [60, col. 5 lines 30 to 40] containing a coil [64] with a moldable material [100, col. 6 lines 25 to 30] covering at least a portion of a face of said metal core, wherein the moldable material comprises a donor material [Lexan, epoxy, polyurethane and a natural or synthetic rubber].

Grove fails to teach that the donor material has and elasticity greater than about 2 million psi.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the elasticity of the donor material [epoxy, polyurethane and a natural or synthetic rubber] used depending on the desired frictional coefficient of the material, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 46, Grove discloses an electromagnet with a polymer impregnated, a high-density sinter iron powder metal core [60, col. 5 lines 30 to 40] containing a coil [64] with a moldable material [100, col. 6 lines 25 to 30] covering at least a portion of a face of said core. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a powder core strength within a certain range to adjust the strength of the core depending on the environment for which it is used, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

Claim 47, Grove discloses an electromagnet with a polymer impregnated, a high-density sinter iron powder metal core [60, col. 5 lines 30 to 40] containing a coil [64] with a moldable material [100, col. 6 lines 25 to 30] covering at least a portion of a face of said core. It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the composition of the powder metal to a specific Young's modulus to maximize the strength of the core, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Allowable Subject Matter

The indicated allowability of claims 32-35, 37-43, 45, 46 and 47 is withdrawn in consideration to previously applied Groove (US 4,004,262). Rejections based on the newly cited reference(s) follow.

Claims 1-22 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 1, the prior art of record does not teach nor suggest, in the claimed combination, an electromagnet for use in a brake with a polymer impregnated powder metal core with the claimed Young's modulus of elasticity between 6.8 to 29.5 million psi, and an injection molded material with a donor material having an elasticity greater than 2 million psi, attached to the powder metal core.

Claim 3, the prior art of record does not teach nor suggest, in the claimed combination, an electromagnet for use in a brake with a polymer impregnated powder metal core with the claimed Young's modulus of elasticity between 6.8 to 29.5 million psi, and an injection molded material of the claimed composition with a donor material having an elasticity greater than 2 million psi, attached to the powder metal core.

Claims 9 and 14, the prior art of record does not teach nor suggest, in the claimed combination, an electromagnet for use in a brake with a powder metal housing and core, a bobbin, a coil and a friction material of the claimed composition.

Response to Arguments

Applicant's arguments filed 04/28/2008 have been fully considered but they are not persuasive.

As to claims 32-35, Applicant states that there is no indication that the friction material is a donor material in the way the term is used.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a specific definition for donor material) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As to claims 32-35, Applicant states that there is no suggestion to modify the rim of Grove to discover an "optimum or workable range" for the thickness.

In response, Grove is silent with respect to the rim thickness of the powder metal housing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the thickness of the rim of the housing to change the magnetic properties of the housing, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233

As to claims 38, 42, 43 and 47, Applicant states that the Examiner fails to provide a suggestion or motivation for changing the composition of the powder metal to a specific Young's modulus and that the Examiner is using hindsight to justify the modification,

In response, the office action suggests that Young's modulus of the metal core of Grove would be modified to maximize the strength of the core. In addition case law states that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BERNARD ROJAS whose telephone number is (571)272-1998. The examiner can normally be reached on M and W-F, 5:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Elvin G Enad/
Supervisory Patent Examiner, Art Unit 2832

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